Stuttgarter Beiträge zur Naturkunde
Serie A (Biologie)

Herausgeber:

Staatliches Museum für Naturkunde, Rosenstein 1, D-70191 Stuttgart

Stuttgarter Beitr. Naturk.	Ser. A	Nr. 649	11 S., 13 Abb.	Stuttgart, 4. VI. 2003

Studies on Asiatic *Apophylia* (Insecta: Coleoptera: Chrysomelidae). Part 2: Revision of the *aeruginosa* and *lebongana* species groups

Jan Bezděk

Abstract

The *Apophylia aeruginosa* and *A. lebongana* species groups are defined and revised. Two species new to science are described: *Apophylia hajeki* **n. sp.** from Bhutan and Nepal, and *A. micheli* **n. sp.** from Nepal and India. *Apophylia maculata* Kimoto is considered to be a new synonym of *A. lebongana* Maulik. Lectotypes are designated for *A. nilakrishna* Maulik and *A. lebongana* Maulik. Main diagnostic characters are described and illustrated together with drawings of the male genitalia of all species. A key to the species of *Apophylia* with male abdominal teeth is also included.
Keywords: Taxonomy, new species, new synonym, lectotype designation, Coleoptera, Chrysomelidae, Galerucinae, *Apophylia*, Oriental Region.

Zusammenfassung

Die Arten der *Apophylia aeruginosa* und *A. lebongana*-Gruppen werden charakterisiert und revidiert. Zwei für die Wissenschaft neue Arten werden beschrieben: *Apophylia hajeki* **n. sp.** (aus Bhutan und Nepal) and *A. micheli* **n. sp.** (aus Nepal und Indien). *A. maculata* Kimoto wird als ein neues Synonym von *A. lebongana* Maulik erkannt. Die Lectotypen der Arten *A. nilakrishna* Maulik und *A. lebongana* Maulik werden festgelegt. Die wichtigsten diagnostischen Merkmale der Gruppe werden beschrieben und gemeinsam mit den männlichen Genitalien aller behandelten Arten abgebildet. Eine Bestimmungstabelle für die *Apophylia*-Arten mit Abdominal-Zähnchen bei den Männchen wurde erstellt.

Contents

1 Introduction 2
2 Revision of the *Apophylia aeruginosa* group 3
2.1 General 3
2.2 *Apophylia aeruginosa* (Hope, 1831) 3
2.3 *Apophylia nilakrishna* Maulik, 1936 3
2.4 *Apophylia hajeki* **n. sp.** 4
3 Revision of the *Apophylia lebongana* group 5
3.1 General 5

SHOUT
SHARE
IT

3.2 *Apophylia lebongana* Maulik, 1936 5
3.3 *Apophylia schawalleri* Medvedev, 1992 6
3.4 *Apophylia micheli* **n. sp.** 7
4 Key to the species of *Apophylia* with male abdominal teeth 11
5 References 11

1 Introduction

The genus *Apophylia* Thomson, 1858, distributed in the Palaearctic, Oriental and Afrotropical regions, is the only group of the subfamily Galerucinae, characterised by their sexual dimorphism in the claw structure which is bifid in males and appendiculate in females. Until now, about 50 valid species are known while 63 names of Asiatic *Apophylia* are available. The present paper is my second contribution to the knowledge of the Asiatic species of the genus *Apophylia*, it is a continuation of my previous studies (Bezděk in press).

Two species groups of *Apophylia* are defined and revised. The *Apophylia aeruginosa* group is characterised by one pair of teeth each on the first and second male sternites, and the *A. lebongana* group by a single pair of small pubescent teeth on the first male sternite. Two species are described below which are new to science: *A. micheli* n. sp. and *A. hajeki* n. sp. A key to the identification of all species is presented.

Exact label data are cited for type specimens when recording the label data of type materials; a double slash (//) divides data of different labels. The type localities are cited in the original spelling. Other remarks of the author are abbreviated in square brackets: [p] – preceding data are printed; [h] – preceding data are handwritten; [w] – white label.

Acronyms

BMNH	The Natural History Museum, London, United Kingdom (Sharon Shute)
JBCB	Collection Jan Bezděk, Brno, Czech Republic
JVCJ	Collection Jiří Voříšek, Jirkov, Czech Republic
LMRM	Collection Lev N. Medvedev, Moscow, Russia
NHMB	Naturhistorisches Museum Basel, Switzerland (Eva Sprecher-Uebersax, Michel Brancucci)
RBNN	Collection Ron Beenen, Nieuwegein, The Netherlands
SMNS	Staatliches Museum für Naturkunde Stuttgart, Germany (Wolfgang Schawaller)

Acknowledgements

I would like to express my thanks to all curators and collectors listed above who gave permission to examine their materials, and to Dirk Ahrens (Eberswalde, Germany) and José M. Vela (Malaga, Spain) for providing additional literature. Special thanks are extended to my friend Martin Obořil (Brno, Czech Republic) for his excellent drawings of the pronota.

The present study was supported by the Research Programme of the Mendel University of Agriculture and Forestry (AF MZLU MSM 432100001), granted by the Ministry of Education.

2 Revision of the *Apophylia aeruginosa* group

2.1 General

The following combination of characters distinguishes the species of the *A. aeruginosa* group from other species of *Apophylia*: one pair of big teeth each placed near the posterior margins of the first and second male sternites (Fig. 1); basimetatarsomere robust and often enlarged (Figs. 8, 9); aedeagus in lateral view more or less curved in the middle, with rounded and hooked apex and with distinctly enlarged lateral parts (Figs. 5, 6, 7); entire body uniformly black, except for metallic green elytra (only knees sometimes paler).

Apophylia aeruginosa, the first known species of this group, was described by HOPE (1831) under the name *Auchenia Æruginosa*. HOPE only had as single female available, and did not mention the male abdominal teeth in his very short description. This character was recorded in a redescription published by MEDVEDEV & SPRECHER-UEBERSAX (1998). MAULIK (1936) originally described a second species, *A. nilakrishna*, but he overlooked the male abdominal teeth although he had males at his disposal. During my study of *Apophylia* materials in the NHMB I found another new species (*A. hajeki* n. sp.) which was previously identified by KIMOTO (1977) as *A. nilakrishna*.

2.2 *Apophylia aeruginosa* (Hope, 1831)

Auchenia Æruginosa Hope, 1831: HOPE (1831: 29): type locality Nepaul.
Apophylia aeruginosa: MAULIK (1936: 80, 81): key, Nepal, Manipur; WILCOX (1971: 142); TAKIZAWA (1990: 277): NE India; MEDVEDEV & SPRECHER-UEBERSAX (1998: 27, 29): redescription, key; MEDVEDEV & SPRECHER-UEBERSAX (1999: 299).

Type material examined: Holotype (♀), labelled: "Type [round white label with red margin, p] // *aeruginosa* Hope [w, h] // Hardwicke Begwest. [w, p] // *Apophylia aeruginosa* Hope (*Auchenia*) Type 4156 [w, h]" (BMNH).

Additional material examined: **Nepal**: Kathmandu V. Godavari, 1500 m, 19.V.1989, M. BRANCUCCI leg. (1 ♂ in NHMB); Myagdi distr., N of Bega Deorali, 2400 m, 16.–17.V.1995, MARTENS & SCHAWALLER leg. (1 ♀ in SMNS); Dolakha distr., lower Amatal Khola, 1700 m, 9.VI.2000, W. SCHAWALLER leg. (1 ♂ in SMNS); Dolakha distr., N slope of Khare Khola, 2200 m, 30.V.–1.VI.2000, W. SCHAWALLER leg. (1 ♂ in SMNS); Dolakha distr., Khare Khola, 1400–1900 m, 30.V.2000, W. SCHAWALLER leg. (1 ♀ in SMNS).

Aedeagus as in Fig. 6.

Distribution: Nepal, NE India.

2.3 *Apophylia nilakrishna* Maulik, 1936

Apophylia nilakrishna Maulik, 1936: MAULIK (1936: 80, 83–84): key, type locality Western Himalayas (Gori Valley); WILCOX (1971: 146); TAKIZAWA (1990: 277): Nepal; MEDVEDEV & SPRECHER-UEBERSAX (1998: 28): key; MEDVEDEV & SPRECHER-UEBERSAX (1999: 300); MEDVEDEV (2000: 10): Nepal; KIMOTO (2001: 34): Nepal.

Type material examined: Lectotype (♂), present designation, labelled: "Burphu, Gori V., 11500 ft. India. H. G. C. [w, p] // *Apophylia nilakrishna* [h] S. Maulik [p] 1936 [w, h]" (BMNH); 4 paralectotypes (♂♂), labelled: "Burphu, Gori V., 11500 ft. India. H. G. C. [w, p]" (BMNH). – The specimens are provided with one red label: "Lectotypus [or Paralectotypus] *Apophylia nilakrishna*, Maulik, 1936, des. J. Bezděk 2002".

Additional material examined: **Nepal**: Karnali zone, Rara lake, 3000 m, 27.–29.VI.1995, AHRENS & POMMERANZ leg. (1 ♂ and 1 ♀ in JBCB; 3 ♂♂ and 1 ♀ in RBNN); Karnali zone, Chautha Sinja Khola, 2600–2800 m, 25.VI.1995, AHRENS & POMME-

RANZ leg. (2 ♀♀ in RBNN); Jumla distr., upper Sinja Khola, 2600 m, 15.VI.1998, W. SCHAWALLER leg. (3 ♂♂ and 3 ♀♀ in SMNS). – **India**: Uttar Pradesh, Badrinath, 3200–3600 m, 1.VIII.1989, A. RIEDEL leg. (3 ♂♂ and 1 ♀ in SMNS); Uttar Pradesh, 15 km S Badarinath, 30 km N Joshimath, 2800 m, 9.–11.VII.1994, M. SNÍŽEK leg. (1 ♀ in JVCJ); Kumaon, Laspa Gori R., 10 000 ft, H. G. CHAMPION (5 ♂♂ and 9 ♀♀ in BMNH).

Aedeagus as in Fig. 5.

Distribution: Nepal, India, Bhutan (?). KIMOTO (1977) recorded *A. nilakrishna* from Bhutan based on the series deposited in NHMB. I have found a part of this series, but the specimens refer to *A. hajeki* n. sp. However, it cannot be ruled out that the true *A. nilakrishna* is among the unfound material.

2.4 *Apophylia hajeki* n. sp.

Apophylia nilakrishna: KIMOTO (1977: 353): Bhutan.

Type material: Holotype (♂) and 2 paratypes (♂ and ♀), labelled: "km 87 von Phuntsholing [p] 22.5. [w, h] // Nat.-Hist. Museum Basel – Bhutan Expedition 1972 [w, p] // *Apophylia nilakrishna* Maulik [h] Det. S. Kimoto, 19 [p] 75 [w, h]" (NHMB); 3 paratypes (1 ♂ and 2 ♀♀), labelled: "Dechhi Paka 3300 m [p] 19–20/6 [w, h] // Nat.-Hist. Museum Basel – Bhutan Expedition 1972 [w, p] // *Apophylia nilakrishna* Maulik [h] Det. S. Kimoto, 19 [p] 75 [w, h]" (NHMB); 2 paratypes (♀♀), labelled: "Nobding 41 km O Wangdi Ph. 2800 m [w, p] // Nat.-Hist. Museum Basel – Bhutan Expedition 1972 [w, p] // *Apophylia nilakrishna* Maulik [h] Det. S. Kimoto, 19 [p] 75 [w, h]" (NHMB); 1 paratype (♀), labelled: "Gorza 2100 m 5–6.VI.1985 [w, p] // E-Nepal Koshi M. Brancucci [w, p] // *Apophylia nilakrishna* Ml. [h] L. N. Medvedev det. 19 [p] 90 [w, p]" (NHMB); 1 paratype (♀), labelled: "Phulvari Waku 1200–1600 m 9.VI.1985 [w, p] // E-Nepal Koshi M. Brancucci [w, p]" (NHMB). – The types are provided with one red label: "Holotypus [Paratypus, resp.] *Apophylia hajeki* sp. nov. J. Bezděk det. 2002".

Etymology: The name of the new species is dedicated to my dear friend JIŘÍ HÁJEK (Czech Republic, Prague), who is a specialist for Dytiscidae, Gyrinidae and Eulichadidae.

Description: Body flattened, parallel, subopaque, pubescent. Coloration black; mouthparts, antennomeres 1 to 3 and knees dark brown. Elytra metallic green.

Labrum trapezoidal, anterior margin sinuate, covered with 4 long setae in a transverse row. Anterior part of head and frontal tubercles lustrous, covered with fine microsculpture. Two rows of long pale setae situated in front of antennal insertions. Frontal tubercles large, subtriangular, slightly elevated above vertex. Vertex dull, covered with large dense punctures and densely set fine short pale hairs. Interantennal space with a small deep groove. Antennae robust, 0.7 times as long as body; length ratio of antennomeres 1 to 11 12:6:15:20:11:11:8:9:7:7:8. Antennomeres 6 to 11 distinctly extended and flattened, antennomeres 9 and 10 subquadrate.

Pronotum transverse (Fig. 3), 1.8 times as broad as long, widest in its first third. Anterior margin broadly rounded, lateral margins rounded, posterior margin almost straight, with three very shallow sinuations. All margins indistinctly bordered. Anterior angles rectangular, widely rounded, with small tooth directed laterally, posterior angles obtusely angulate, broadly rounded, with a small tooth directed upwards. Surface with two very large lateral depressions, two very small shallow depressions situated basally near the posterior angles and two small shallow depressions in the midline. Pronotum densely covered with large punctures and densely set short pale hairs.

Scutellum triangular, with the apex rounded, densely covered with microsculpture, small punctures and short pale hairs, dull. Elytra 1.5 times as broad as the base

of the pronotum, densely covered with small punctures and short dense pale hairs. Humeral calli well developed. Epipleura distinct, gradually narrowed to apex. Macropterous.

Basipro- and basimesotarsomeres slightly crescent, with the apex directed downwards. Basimetatarsomere robust but relatively slender, 2 times as long as the two following metatarsomeres combined (Fig. 9). Underside with dense large punctures and densely set pale hairs. Shape of aedeagus as in Fig. 7. Body length: 7.5–8.9 mm (holotype 7.65 mm).

Sexual dimorphism: Male: First and second sternites with a pair of large teeth each, last sternite with a wide shallow subtriangular incision, basimetatarsomere robust, claws bifid. Female: First and second sternites without teeth, the last visible sternite complete, basimetatarsomere slender, claws appendiculate.

Differential diagnosis: *A. hajeki* n. sp. is closely related to *A. nilakrishna* Maulik, 1936. Both species can be distinguished by the structure of the basimetatarsus which is more slender and longer in *A. hajeki* n. sp. (Fig. 9) but more stout and shorter in *A. nilakrishna* (Fig. 8), and by the shape of the aedeagus (Figs. 5, 7). *A. aeruginosa* (Hope, 1831) differs from the new species by its yellows legs. *A. schawalleri* Medvedev, 1992, and *A. micheli* n. sp. differ in having only one pair of teeth on the first male sternite.

3 Revision of the *Apophylia lebongana* group

3.1 General

The following characters distinguish the species of the *A. lebongana* group from other species of *Apophylia*: One pair of small teeth covered with a dense hairbrush placed near the posterior margin of the first male sternite (Fig. 2); legs black, knees sometimes paler; pronotum black or yellow with a median black spot.

The *A. lebongana* group now comprises three species. Before, only two species were known: *A. lebongana* Maulik, 1936 and *A. schawalleri* Medvedev, 1992. In addition, *A. maculata* Kimoto, 1977 is considered as a new synonym of *A. lebongana*. During the revision of *Apophylia* materials deposited in the SMNS I found one specimen concealed in a series of *A. nilakrishna* which turned out to be new to science. Two additional specimens were found in the NHMB. The new species is described below.

3.2 *Apophylia lebongana* Maulik, 1936

Apophylia lebongana Maulik, 1936: Maulik (1936: 80, 82–83): key, type locality Darjeeling (Phoobesring, Lebong); Wilcox (1971: 145).
Apophylia maculata Kimoto, 1977: Kimoto (1977: 352): type locality Bhutan (87 km von Phuntsholing); Kimoto & Takizawa (1983: 86): Nepal; Medvedev & Sprecher-Uebersax (1998: 28): key; Medvedev & Sprecher-Uebersax (1999: 300): Nepal, Bhutan; Medvedev (2000: 10): Nepal. **n. syn.**

Type material examined:
Apophylia lebongana Maulik, 1936: Lectotype (♂), present designation, labelled: "Lebong 5000 ft. VI.09 H. M. L. [w, p] // *Apophylia lebongana* Mlk. [h] S. Maulik [p] paratype 1936 [w, h]" (BMNH); paralectotype (♀), labelled: "Type [round white label with red margin, p] // Lebong 5000 ft. VI.09 H. M. L. [w, p] // *Apophylia lebongana* [h] S. Maulik [p] Type 1936 [w, h]" (BMNH); paralectotype (♂), labelled: "Phoobesring Lebong 5000 ft. Partridge. X.10 [w, p] // *Apophylia lebongana* Mlk. [h] S. Maulik [p] paratype 1936 [w, h]" (BMNH). The specimens

are provided with one red label: "Lectotypus [or Paralectotypus] *Apophylia lebongana*, Maulik, 1936, des. J. Bezděk 2002".

Apophylia maculata Kimoto, 1977: Holotype (♀) and paratype (♀), labelled: "km 87 von Phuntsholing [p] 22.5 [w, h] // Nat.-Hist. Museum Basel – Bhutan Expedition 1972 [w, p] // Holotype [red label, p; resp. Paratopotype, blue label, p] // *Apophylia maculata* Kimoto, n. sp. [w, h]" (NHMB); paratype (♀), labelled: "Wangdi Phodrang 1700 m [p] 21 km O [w, h] // Nat.-Hist. Museum Basel – Bhutan Expedition 1972 [w, p] // Paratopotype [blue label, p] // *Apophylia maculata* Kimoto, n. sp. [w, h]" (NHMB).

Additional material examined: **India**: Darjeeling (1 ♂ and 1 ♀ in MNHN); Bengale Kurseong (1 ♀ in MNHN); Sikkim, Mungphu (1 ♂ in BMNH); Sikkim (1 ♂ in NHMB). – **Nepal**: Godavari, 1500 m, 10.–12.VI.1984, Kathmandu V., Bhakta B. (1 ♂ in NHMB); Bhojpur dist., Dilkharka to Gothe, 1900–2100 m, 27.V.1997, M. Hauser leg. (2 ♀♀ in SMNS); Kathmandu, Phulchoki Mt., 1700 m, 21.VI.2000, W. Schawaller leg. (1 ♂ in SMNS). – **China**: Yunnan, Weibaoshan Mts., W slope, 2000–2800 m, 25°11′N 100°24′E, 25.–28.VI.1992, V. Kubáň leg. (1 ♂ and 1 ♀ in NHMB).

Maulik missed an important character in his description of *A. lebongana*. There are two small teeth directed backwards which are placed on the posterior margin of first male sternite. Kimoto (1977) described *A. maculata* based on four females from Bhutan. I compared the type series of *A. lebongana* and *A. maculata*. Without doubt, *A. maculata* is a new synonym of *A. lebongana*.

The aedeagus of the lectotype is weakly sclerotized and flattened laterally (Fig. 10). The fully sclerotized aedeagus is shown in Fig. 11 (based on a specimen from Nepal, deposited in NHMB).

Distribution: India, Nepal, Bhutan, China.

3.3 *Apophylia schawalleri* Medvedev, 1992

Apophylia schawalleri Medvedev, 1992: Medvedev (1992: 12): type locality Nepal (Taplejung Distr., Tamur Khola, Chirua); Medvedev & Sprecher-Uebersax (1998: 28): key; Medvedev & Sprecher-Uebersax (1999: 300).

Type material examined: Holotype (♂), labelled: "Nepal-Expedition Jochen Martens [w, p] // 290 Taplejung Dist., Tamur Khola, Chirua 1200 m feinerdiger Boden, Schlucht-W 14 Sep 83 Martens & Daams l. [w, p] // Holotypus [p] *Apophylia schawalleri* L. Medv. [red label, h]" (SMNS); paratype (♀), labelled: "Nepal-Expedition Jochen Martens [w, p] // 224 Dhading Dist., Buri Gan-daki, gegenüber Pangshing bus Brücke unter Nyak 1. Aug 83 Martens & Schawaller leg. 1600–1800 m Mischwald [w, p] // Paratypus [red label, p]" (SMNS); 3 paratypes (♂♂), labelled: "Nepal-Expedition Jochen Martens [w, p] // 406 Sankhua Sabha Distr., betw. Pahakhola and Karmarang 1800–1500 m, cultural land, bushes, 4 June 88 J. Martens & W. Schawaller leg. [w, p] // Paratypus [red label, p]" (SMNS); paratype (♂), labelled: "Nepal-Expedition Jochen Martens [w, p] // 405 Sankhua Sabha Distr., betw. Pahakhola and Karmarang 2300–1800 m, open forest bushes, 4 June 1988 J. Martens & W. Schawaller leg. [w, p] // Paratypus [red label, p]" (SMNS).

Additional material examined: **Nepal**: Arun valley, Lamobagar Gola, 1400 m, 28.–31.V.1980, C. Holzschuh leg. (1 ♂ in LMRM); Arun valley, Lamobagar Gola, 1400 m, 8.–14.VI.1983, M. Brancucci leg. (5 ♂♂ in NHMB); Tanje, Dordi Kh., 19.IX.1980, J. Seifert leg. (5 ♂♂ and 5 ♀♀ in JVCJ); Annapurna Mts., Madi Khola below Sikles, 1500 m, 4.VIII.1995, Schmidt leg. (1 ♂ in RBNN); Gorkha distr., Chuling Khola, 2800 m, on *Quercus semecarpifolia*, 2.–3.VIII.1983, Martens & Schawaller leg. (1 ♀ in SMNS); Kangchenjunga Himal Mts., Chiruwa vill., 1260 m, 27°29′N 87°45′E (GPS), 30.VI.–1.VII.2000, J. Schneider leg. (1 ♀ in NHMB).

Aedeagus as in Fig. 12.

Distribution: Nepal.

3.4 *Apophylia micheli* n. sp.

Type material: Holotype (♂), labelled: "Nepal-Expedition Jochen Martens [w, p] // 271 Taplejung Dist., Kabeli Khola, Yamputhin 1650–1800 m, Kulturland/Mischwald/ Bambus 3/4 Sep 83 MARTENS & DAAMS l. [w, p] // *Apophylia nilakrishna* Mlk. [h] L. Medvedev det. [w, p]" (SMNS); 1 paratype (♂), labelled: "Lagyap [p] 2500 m 2.VII.1984 [w, h] // India Sikkim Ch. J. Rai [w, p] // *Apophylia nilakrishna* Maulik [h] Det. S. Kimoto, 19 [p] 75 [w, h]" (NHMB); 1 paratype (♀), labelled: "Samthar 28.VII.85 [w, p] // Indien Darjeeling D. Ch. J. Rai [w, p] // *Apophylia nilakrishna* Mlk. [h] L. Medvedev det. [w, p]" (NHMB). – The types are provided with one red label: "Holotypus [Paratypus, resp.] *Apophylia micheli* sp. nov. J. Bezděk det. 2002".

Etymology: The name of the new species is dedicated to Dr. MICHEL BRANCUCCI, head of the department of entomology of the NHMB.

Description: Body flattened, slightly widened backwards, subopaque, pubescent. Whole body black, mouthparts, bases of antennomeres 1 to 3 and knees dark brown, lateral margins of clypeus with a very small red spot. Elytra metallic green with a very narrow golden red stripe along the lateral sides.

Labrum transverse, each side with several long setae, anterior margin sinuate. Anterior part of head shiny, covered with fine microsculpture. Two rows of long pale setae situated in front of antennal insertions. Frontal tubercles large, subtriangular, slightly elevated above the vertex, not punctate, lustrous. Vertex opaque, covered with small dense punctures and densely set very fine short pale hairs. Interantennal space with a small deep groove. Antennae slender, 0.85 times as long as body; length ratio of antennomeres 1 to 11 22:13:32:37:27:25:22:20:17:15:18.

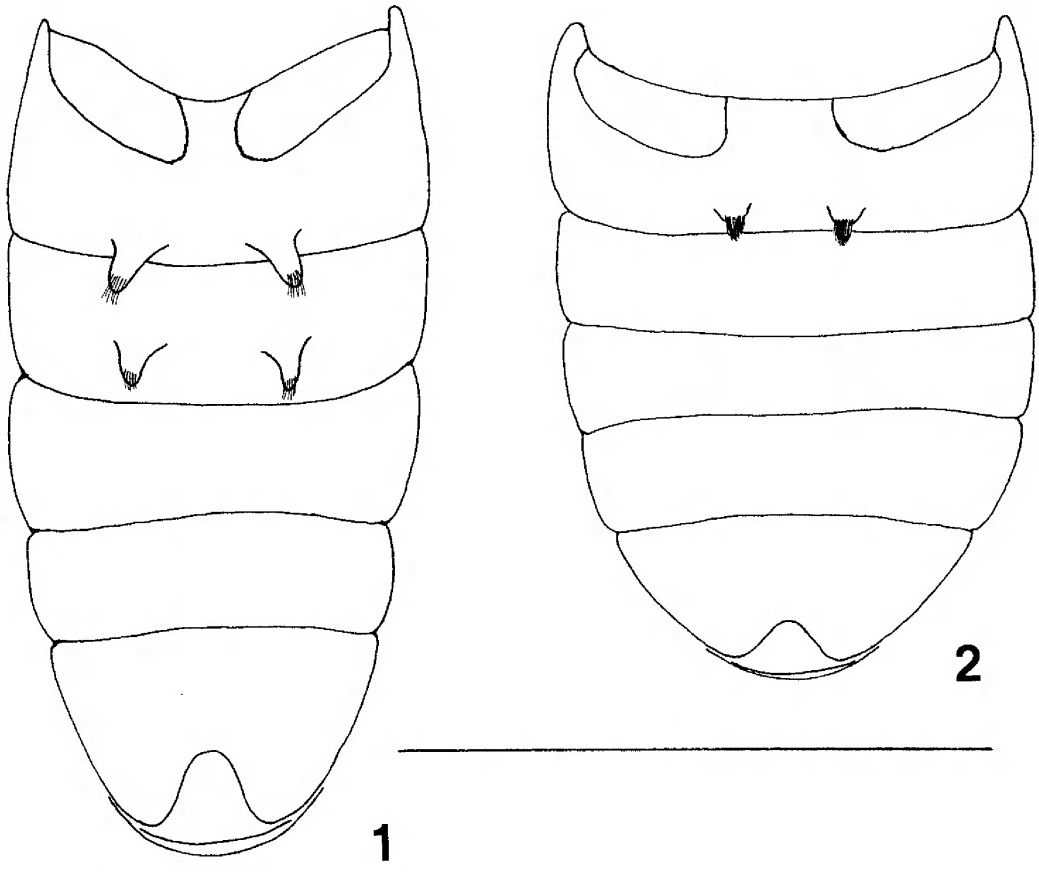
Pronotum transverse (Fig. 4), 1.9 times as broad as long, widest in its first third. Anterior margin moderately rounded, lateral margins rounded, posterior margin almost straight, with a small shallow sinuation in the middle. All margins indistinctly bordered. Anterior angles rectangular, sharp, with a small tooth directed laterally before the corners, posterior angles obtusely angulate, widely rounded, with a small tooth directed upwards. Surface with a deep midline and with two large depressions laterally. Pronotum densely covered with small punctures and densely set long pale hairs.

Scutellum subtriangular, with the apex rounded, densely covered with small punctures and short pale hairs, dull. Elytra 1.5 times as broad as the base of pronotum, densely covered with small punctures and short densely set pale hairs. Humeral calli well developed. Epipleura distinct, gradually narrowed to apex. Macropterous.

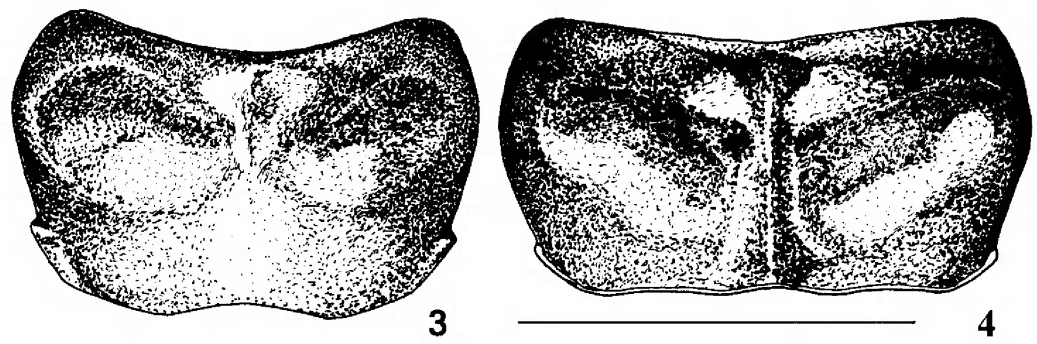
Basipro- and basimesotarsomeres crescent, with the apex directed downwards. Basimetatarsomere 1.35 times as long as the two following metatarsomeres combined. Claws bifid. Underside with dense small punctures and densely set long pale hairs. The first sternite with a pair of small teeth bearing the brush of short hairs. Last sternite with a wide shallow subtriangular incision. Shape of aedeagus as in Fig. 13. Body length 6.85–7.55 mm (holotype 7.1 mm).

Sexual dimorphism: Male: First and second sternites with a pair of small teeth each bearing a brush of short hairs, last sternite with a wide shallow subtriangular incision, claws bifid. Female: First sternite without teeth, the last visible sternite complete, claws appendiculate.

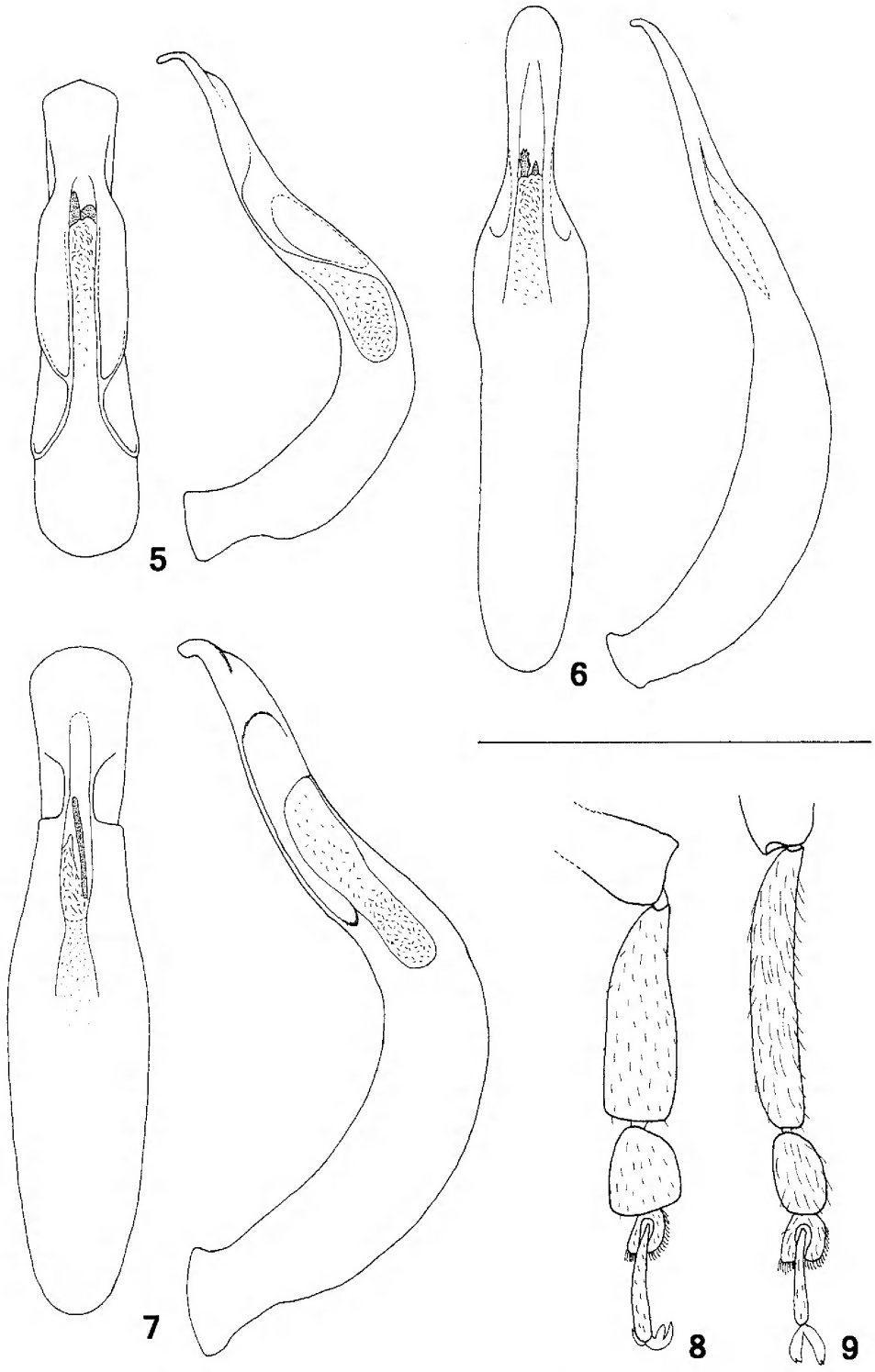
Differential diagnosis: *A. micheli* n. sp. is closely related to *A. schawalleri* Medvedev, 1992. *A. micheli* is distinguished by the larger size of the body, longer antennae, and the structure of its aedegus (Figs. 12, 13). The species of the *A. aeruginosa* group (*A. aeruginosa*, *A. nilakrishna* and *A. hajeki* n. sp.) differ from the new species by a pair of big teeth each on the first and second sternites.



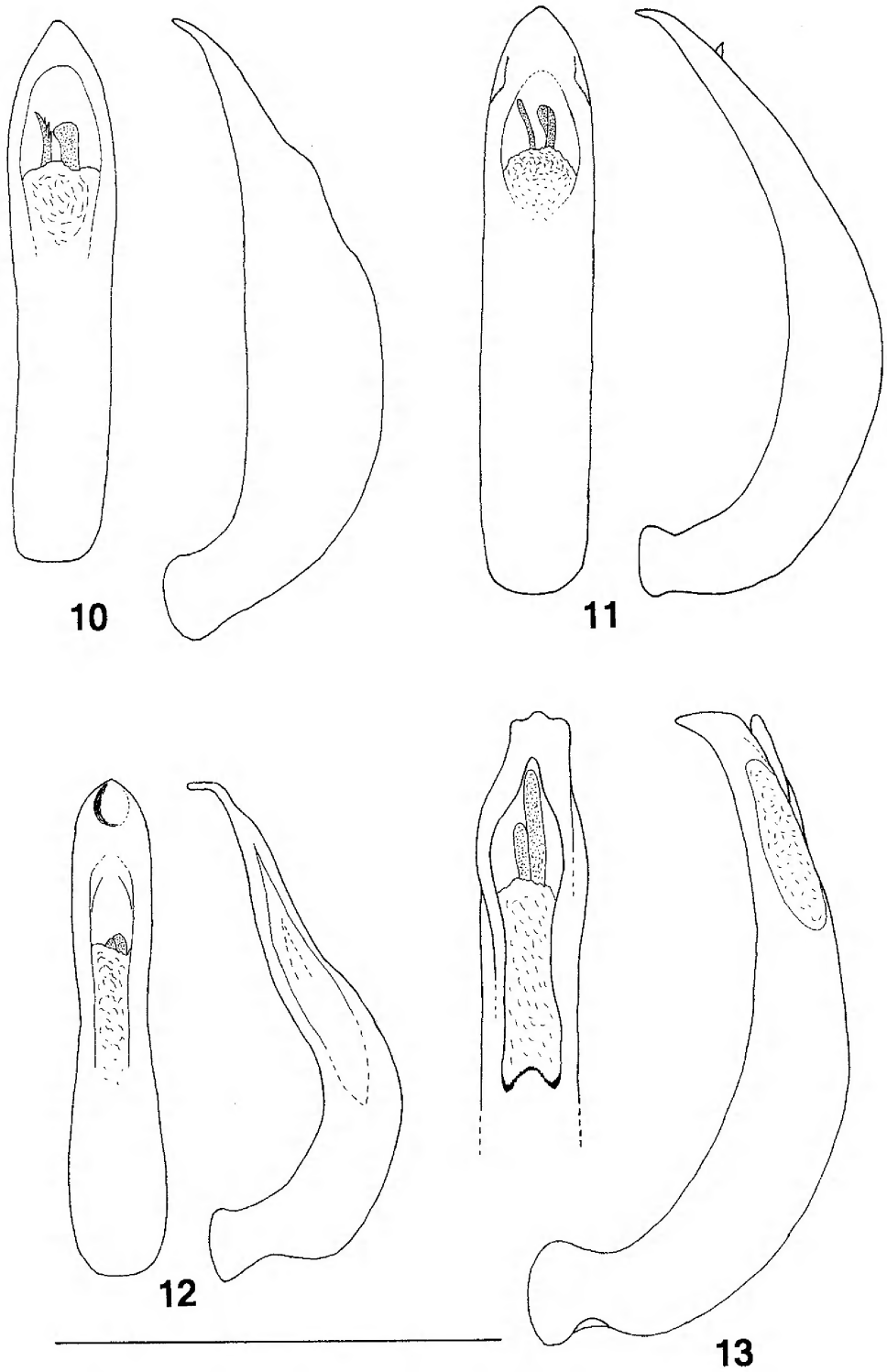
Figs. 1–2. *Apophylia* spp., underside of male abdomen, showing the characteristic teeth. – **1**. *A. aeruginosa* group. **2**. *A. lebongana* group. – Scale: 2 mm.



Figs. 3–4. *Apophylia* spp., pronotum. – **3**. *A. hajeki* n. sp. **4**. *A micheli* n. sp. – Scale: 1 mm; drawings of M. Oborřil.



Figs. 5–9. *Apophylia* spp. – **5–7**. Aedeagus in dorsal and lateral view. **5**. *A. nilakrishna*. **6**. *A. aeruginosa*. **7**. *A. hajeki* n. sp. – **8–9**. Male basimetatarsus. **8**. *A. nilakrishna*. **9**. *A. hajeki* n. sp. – Scale: 1 mm.



Figs. 10–13. *Apophylia* spp., aedeagus in dorsal and lateral view. – **10.** *A. lebongana* (lectotype). **11.** *A. lebongana* (specimen from Nepal). **12.** *A. schawalleri*. **13.** *A. micheli* n. sp. – Scale: 1 mm.

4 Key to the species of *Apophylia* with male abdominal teeth

1 First male sternite with a pair of small teeth covered with a brush of hairs; second sternite without teeth (Fig. 2) 2
– First and second male sternites with a pair of large teeth each (Fig. 1) 4
2 Pronotum fulvous with a central black spot. Aedeagus as in Figs. 10, 11 ..... *A. lebongana* Maulik, 1936
– Pronotum black 3
3 Antennae longer (0.85 times as long as the body). Aedeagus as in Fig. 13. Body length 6.9–7.6 mm ..... ***A. micheli* n. sp.**
– Antennae shorter (0.6–0.75 times as long as the body). Aedeagus as in Fig. 12. Body length 5.0–7.3 mm ..... *A. schawalleri* (Medvedev, 1992)
4 Legs fulvous. Aedeagus as in Fig. 6 ..... *A. aeruginosa* (Hope, 1831)
– Legs black 5
5 Basimetatarsomere shorter and enlarged in male (Fig. 8). Aedeagus as in Fig. 5 ..... *A. nilakrishna* Maulik, 1936
– Basimetatarsomere longer and relatively slender in male (Fig. 9). Aedeagus as in Fig. 7 ..... ***A. hajeki* n. sp.**

5 References

BEZDĚK, J. (in press): Studies on Asiatic *Apophylia* (Chrysomelidae: Galerucinae). Part 1: New synonyms, lectotype designations, redescriptions, descriptions of new species and notes. – Genus; Wroclaw.

HOPE, F. W. (1831): Synopsis of the new species of Nepaul Insects in the collection of Major General Hardwicke. – The Zoological Miscellany **1**: 21–32.

KIMOTO, S. (1977): Ergebnisse der Bhutan-Expedition 1972 des Naturhistorischen Museums in Basel. Coleoptera: Fam. Chrysomelidae, Subfam. Galerucinae. – Entomologica Basiliensia **2**: 351–392.

KIMOTO, S. (2001): The Chrysomelidae (Insecta: Coleoptera) collected by the Kyushu University scientific expedition to the Nepal Himalaya in 1971 and 1972. – Bulletin of the Kitakyushu Museum of Natural History **20**: 17–80.

KIMOTO, S. & TAKIZAWA, H. (1983): Chrysomelid beetles of Nepal, collected by the Himalaya expedition 1979 of the National Science Museum, Tokyo (part 1). – Bulletin of National Science Museum, Tokyo, Series A (Zoology) **9**: 83–96.

MAULIK, S. (1936): The fauna of British India, including Ceylon and Burma. Coleoptera, Chrysomelidae (Galerucinae), 648 pp.; London (Taylor & Francis).

MEDVEDEV, L. N. (1992): Chrysomelidae from the Nepal Himalayas, III (Insecta: Coleoptera). – Stuttgarter Beiträge zur Naturkunde, Serie A (Biologie) **485**: 1–36.

MEDVEDEV, L. N. (2000): Chrysomelidae from the Nepal Himalayas, with revision of the genus *Haplosomoides* (Insecta: Coleoptera). – Stuttgarter Beiträge zur Naturkunde, Serie A (Biologie) **616**: 1–32.

MEDVEDEV, L. N. & SPRECHER-UEBERSAX, E. (1998): New data on Chrysomelidae of Nepal. – Spixiana **21**: 25–42.

MEDVEDEV, L. N. & SPRECHER-UEBERSAX, E. (1999): Katalog der Chrysomelidae von Nepal. – Entomologica Basiliensia **21**: 261–354.

TAKIZAWA, H. (1990): Chrysomelid beetles of Nepal, Northeastern India and Western Sikkim collected by the Himalaya expeditions of the National Science Museum. – Japanese Journal of Entomology **58**: 275–291.

WILCOX, J. A. (1971): Chrysomelidae: Galerucinae (Oidini, Galerucini, Metacyclini, Sermylini). – In: WILCOX, J. A. (ed.): Coleopterorum Catalogus Supplementa. Pars **78** (1) (2nd edition): 1–220; The Hague (W. Junk).

Author's address:

JAN BEZDĚK, Mendel University of Agriculture and Forestry, Department of Zoology, Zemědělská 1, 61300 Brno, Czech Republic; e-mail: bezdek@mendelu.cz

Manuscript received: 2.I.2003, accepted: 28.II.2003.

ISSN 0341-0145

Autoren-Richtlinien: http://www.naturkundemuseum-bw.de/stuttgart/schriften
Schriftleitung: Dr. Hans-Peter Tschorsnig, Rosenstein 1, 70191 Stuttgart
Gesamtherstellung: Gulde-Druck GmbH, 72072 Tübingen